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# VITAL RFK BRAIN AREA DAMAGED

## Doctor Says All Such Cases Are Fatal

By HOWARD F. ANGIONE

BOSTON (AP) — The Boston neurosurgeon the Kennedy family summoned after Sen. Robert F. Kennedy was shot said the senator died from massive, irreparable damage to a small but vital communications section of his brain.

"There has been no survival in any patient that had any injury like the one Sen. Kennedy received," Dr. James L. Poppen of the Lakey Clinic said.

Although he was sped by government aircraft to Los Angeles, the 65-year-old friend of the Kennedy family said he arrived after the operation on Robert Kennedy and "my only value was to keep the family informed and give them moral support."

### OUTCOME OBVIOUS

By about noon Wednesday, less than 12 hours after Kennedy was shot, "it should have been obvious to anyone" that he would not live, Poppen said.

By 6:30 that night, he said, the senator met the legal requirement for death—tracings of his brain waves were flat—but a slim hope remained because the waves "sometimes fade out and come back," and shortly afterwards his "pulse and heart rate actually improved" for a time.

But Poppen said that as the hours wore on the brain waves did not revive, the senator's kidneys and other vital organs began to shut down, and finally his heart stopped beating.

Poppen said the ultimate cause of death was "overwhelming, irreversible damage to the pons and midbrain," two adjacent regions deep in the center of the brain.

### 'NARROW PATHS'

The two are narrow pathways through which all the vital information exchanged between major parts of the brain must pass. Traffic in the pathways includes the data that specialists in brain controlling consciousness, heart rate, blood pressure, and all the body's automatic processes.

Poppen said the bullet which pierced the mastoid bone behind the senator's right ear continued to the temporal bone, which was shattered.

He said the bullet and its fragments caused bleeding and swelling along the path, but didn't themselves penetrate as far as the pons and midbrain, where swelling and bleeding were set off by shock waves resulting from the force of the injury.

In time, this bleeding and swelling caused the pons and midbrain tissues to lose their vitality and thus die.

### NERVES LOST

Poppen said that the shattering of the temporal bone also destroyed cranial nerves which control hearing and facial expressions on a person's right side.

If damage to the pons and midbrain had not been so severe and the senator had lived, Poppen said, he also would have been paralyzed on his left side and would not have been able to speak clearly.

Poppen said the senator was operated on not so much to remove bullet fragments as to determine whether a blood clot might have lodged between the brain and his skull, and remove it so that his brain "would have room to swell" as part of its natural reaction to the injury.

Such a blood clot can cause the same symptoms as the more severe damage done to Kennedy's brain and lead to death if not removed, Poppen said, but there is no way to tell the extent of such injuries unless an operation is performed.